The Music Students' Guide to Playing Without Pain

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"The injury is just a reminder of our obligations to ourselves" (McCrane, 2017)

Need for the Study:

- "Musculoskeletal pain is the most commonly reported type of pain [among musicians]" (Stanek, Komes & Murdock, 2017)
- 64-76% of professional orchestral musicians suffer some form of Repetitive Strain Injury so severe that it is affecting their performance abilities (Mitchell, 2017)
- 75% of music students in the College of Musical Arts at BGSU believe that there is a need for a music-specific health and wellness initiative at BGSU (Martin & Brown, 2017)

Purpose of the Study:

- To determine the incidence and characteristics of performance-based pain and injury among collegiate music students at a large, Midwestern institution
- To determine if and how performance-based injury and pain affected music-related stress
- To determine self-reported coping and recovery mechanisms for performance-based injury and pain
- To apply findings toward a second-stage project component to remediate these concerns

Data Collection & Procedure:

- Questionnaire distributed to all students in the BGSU College of Musical Arts via Qualtrics in the Fall of 2017
- Distributed through an email listserv with a two-week data collection window with one reminder email halfway through
- Created questionnaire through adaptations of various existing pain and stress inventories including:
    - Musculoskeletal Pain Intensity and Interference Questionnaire for Musicians (Berque, 2014)
    - Perceived Stress Scale (Cohen, 1988)
- Incorporation of original questions in survey based on research questions such as diet, exercise and lifestyle regimens of the student in direct correlation with the frequency and severity of the pain they are experiencing.

Results:

- Total of 45 valid responses
- Female: 53% (n = 24), Male: 27% (n = 12), Non-Binary: 4% (n = 2)
- Undergraduate: 67% (n = 30), Graduate: 18% (n = 8)
- Music Performance: 36% (n = 16), Music Education: 38% (n = 17), Other Music Specialization: 11% (n = 5)
- Woodwind: 40% (n = 18), Strings: 19% (n = 7), Brass: 9% (n = 4), Voice: 11% (n = 5), Guitar/Piano: 7% (n = 3)

Pain:

- Reliability for the pain severity scale (α = .91) was strong
- The vast majority of participants (84%, n = 38) experienced pain problems that interfered with their ability to play their instrument or sing at the level to which they are accustomed
- A slight majority of students (53%, n = 24) also experienced the same pain they feel when they are playing/singing when they are away from their instruments
- Approximately 64% of students (n = 29) experience mild to moderate pain on average, and around 73% of students (n = 33) experience moderate to severe pain at its worst the week leading up to a major performance

Pain Location:

Students primarily experience the most pain in their shoulders, their right forearm, their wrists, their fingers, their mid to upper-back, and the left side of their neck

Pain Characteristics:

Most students described this pain they are experiencing as feeling sore or tight, with others describing feelings of cramping, aching, or weakness

Pain & Stress:

- Significant modest positive correlation between pain severity and music-related stress ($r = .40$, $p < .05$)
- No significant relationships between hours exercised per week and the two dependent variables
- Significant modest negative correlation between pain severity and hours participants were expected to practice ($r = -.35$, $p < .05$)
- No significant differences across groups (i.e., gender, area, level) and the two dependent variables

Coping Methods:

- Most common coping methods specific to performing included decreasing practice time (58%, $n = 26$), changing their technique (42%, $n = 19$), or taking time off completely from playing their instruments/singing (35%, $n = 16$)
- Other common coping mechanisms included yoga (27%, $n = 12$), massage therapy (22%, $n = 10$), Alexander Technique (20%, $n = 9$), and physical therapy (18%, $n = 8$)
- Over a quarter of students experiencing pain (27%, $n = 12$) said they did not apply any coping techniques

Open-Ended Items:

Prompt: Please give a brief description of your stress regarding your classes, private lessons, and ensemble preparation in this semester.

- "The stress from any and all of my classes and ensembles increases the pain I experience."
- "I just worry that the pain I'm experiencing could end up causing long term issues in my music career."
- "I feel that there are not enough hours in the day to accomplish everything that we are expected to accomplish and still be healthy. Many teachers harp on wellness, but how can we be expected to take care of ourselves when we have 6 hours of practicing and 6 hours of homework that we are expected to complete?"
- "My hands and forearms get inflamed so I try to rest as much as I can. But the problem with that is I'm trying to rest myself to be able to keep playing, by not playing. The solution to me being able to play shouldn't be to stop playing for a while."

Recommendations Based on Questionnaire Results:

- Stretching and warming up before practicing or performing is non-negotiable, and taking practice breaks immediately once you start to experience pain is absolutely necessary
- Staying physically active is necessary to ensure that your smaller muscles are not overcompensating for your larger ones during your practice sessions (musicians are athletes, too!)
- Seeking professional help is essential if you are experiencing consistent pain (e.g., physical therapy, massage therapy, Alexander Technique, Feldenkrais)
    - Sometimes asking medical professionals about diet intolerances can be revealing of larger-scaled issues (Pirtle, 2006)
- Increase your awareness of tension held while performing daily tasks such as gripping your toothbrush when you brush your teeth, gripping the steering wheel while you drive, etc. If you can be aware of the

unnecessary tension you are holding during these tasks and make adjustments to relieve this tension, it will be easier to apply this freedom while playing your instrument (McCrane, 2017)

- Do not ignore warning signs of pain!

Suggestions for Future Research:

- Apply information collected from survey study to create a webpage specifically for music students experiencing pain
    - Synthesize survey study data with information gleaned from area professionals
    - Provide various searchable professional treatment options that are geographically- and condition-specific
    - Provide synthesis of existing research regarding pain prevention and treatment for their specific issue(s)
- Publish findings in a handbook accessible to music students, incorporating various methods of pain prevention and treatment in every aspect of the students' lives

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